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#### State of California AIR RESOURCES BOARD

## EXECUTIVE ORDER A-10-700 Relating to Certification of New Motor Vehicles

#### FORD MOTOR COMPANY

Pursuant to the authority vested in the Air Resources Board by the Health and Safety Code, Division 26, Part 5, Chapter 2; and

Pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That Ford Motor Company 1997 model-year exhaust emission control systems are certified as described below for light-duty trucks:

Fuel Type: Gasoline

Engine Family: VFM2.318G1EK <u>Displacement</u>: 2.3 Liters (140 Cubic Inches)

Emission Control Systems & Special Features:

Three Way Catalytic Converter Heated Oxygen Sensors (two) Exhaust Gas Recirculation Sequential Multiport Fuel Injection

Vehicle models, transmissions, engine codes and evaporative emission control families are listed on attachments.

The certification exhaust emission standards for this engine family in grams per mile are:

Loaded Vehicle	Miles	Non-Methane	Carbon	Nitrogen	Carbon
Weight (lbs.)		<u>Hydrocarbons</u>	<u>Monoxide</u>	<u>Oxides</u>	Monoxide (20°F)
0-3750	50,000	0.25	3.4	0.4	10.0
	100,000	0.31	4.2	0.6	n/a

The certification exhaust emission values for this engine family in grams per mile are:

Loaded Vehicle	<u>Miles</u>	Non-Methane	Carbon	Nitrogen	Carbon
Weight (lbs.)		<u>Hydrocarbons</u>	<u>Monoxide</u>	<u>Oxides</u>	Monoxide (20°F)
0-3750	50,000	0.09	0.6	0.4	2.1
	100,000	0.10	0.7	0.5	n/a

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying the listed vehicle models to the aforementioned exhaust emission standards based on its submitted plan to comply with the fleet average non-methane organic gases (NMOG) exhaust mass emission requirements as set forth in "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles."

BE IT FURTHER RESOLVED: That under the submitted NMOG fleet average compliance plan, if the manufacturer incurs a NMOG debit for the aforementioned model year based on the projected NMOG fleet average exceeding the value required by the above-referenced standards and test procedures, all incurred NMOG debits by the manufacturer shall be equalized as required by the standards and test procedures.

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying the listed vehicle models to the 50,000-mile evaporative emission standards applicable to 1980 through 1994 model-year vehicles in the "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Motor Vehicles," and the listed vehicle models comply with those standards.

BE IT FURTHER RESOLVED: That, based on the evaporative emission phase-in compliance schedule submitted by the vehicle manufacturer, the listed vehicle models shall not be subject to the running loss and useful life standards set forth in the "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Motor Vehicles."

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's "Specifications for Fill Pipes and Openings of Motor Vehicle Fuel Tanks" for the aforementioned model year (Title 13, California Code of Regulations, Section 2235).

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's high-altitude requirements and highway emission standards, and with the California Inspection and Maintenance emission standards in place at the time of certification, as stipulated in "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles."

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the "California Motor Vehicle Emission Control Label Specifications" for the aforementioned model year (Title 13, California Code of Regulations, Section 1965).

BE IT FURTHER RESOLVED: That the manufacturer is certifying the listed vehicle models with a partially complying on-board diagnostic system for the aforementioned model year pursuant to Title 13, California Code of Regulations, Section 1968.1(m)(6.2) ("Malfunction and Diagnostic System Requirements--1994 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty vehicles and Engines").

BE IT FURTHER RESOLVED: That for the listed vehicles, the manufacturer has submitted and the Executive Officer hereby approves the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2035 et seq.).

Vehicles certified under this Executive Order must conform to all applicable California emission regulations,

The Bureau of Automotive Repair will be notified by copy of this order and attachment.

Executed at El Monte, California this 23 day of July 1996.

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R. B. Summerfield
Assistant Division Chief
Mobile Source Division

# 1997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET Page Page Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles

Manufacturer	FORD MOTOR	COMPANY		Eng. Fam	11y_VFM2.118G	1EK				
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and and a male	o Trion-1	v 177.537	T.F.V	tn.ev	ZEV ; EPA 1	Ter-o	*****			
	Exh Std: Tier-0 Tier-1 X TLEV LEV ULEV ZEV ; EPA Tier-0 Tier-1  Veh Class(es): PC LDT1 X LDT2 MDV1 MDV2 MDV3 MDV4 MDV5  Single Cert Std for Multi-Class Eng Fam: (specify: N/A, LDT1, MDV1, ETC.)									
	1 C 16.7	Class Dr.	~ Fam.	ISDAC	TITU: N/A. LDI	T . I'IL V T .				
	M85	CNG	LPG	Other (spe	cify)					
Eval Time/s	el(s): Indo_X_ M85 : Dedicated	Flex-	Fuel	Dual-Fuel	Gasoli	.ne <u>X</u> Die	sel M85			
ruer Type(S)	CNG ING	_ LPG	Other	(specify)			····			
transmit de Come	CNGLNG_ CNGLNG_ ABC	APU C	vole (e.	a. Otto,	Diesel, Turbi	ne)	<del></del>			
Hybria: Type	iguration: I-4	_, nro c _ Diepla	gement:	2.3 /	Liter 140	7 /	Cubic Inche			
Engine Coni	nt_X_ Mid R	_ Disbia	rive. FW	D RWD X	4WD-FT4	WD-PT_				
							102s(3)			
Exhaust ECS	& Special read	ures (EG	., EGR,	/ilee abt	reviations De	er SAE J19	30 Sep 91)			
Service Ac	& Special Feat cum: Std. A	MA		(030 02)						
	Veh. Models				Ign. Sys.	EGR	Catalyst			
Engine	ven. moders	Trans.	Tout		(ECM/PCM)	Syst.	Part No.			
Code/	(all models	Type:	rest		Part No.	Part No				
CALIF	are 4x2 *)			<del>17</del>	-12A650-	-90475-	  -5E211-			
		M-Man.			- 12A650-	1				
	<del> </del>									
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749TR00 N	MAZDA RC LWB	M !	3375	,	F//C-PDA	1 "	1			
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A	MAZDA RC LWB	ti	3375	12.3	I	"   "	1 11			
A	MAZDA RC SWB	"	3375@	12.3	11		] " ] "			
	MAZDA SC SWB		3625	12.3	"	1 "	l			
	MAZDA SC SWB		3750	12.3	"1	"	"			
	RANGER RC LWB		3375	12.3	11	"	II.			
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	MAZDA B230	φ					Ì			
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	1			[						
# Same DPA	for all tires	(P195/70	R14, P21	5/70R14, E	225/70R14)	4	\			
* BC = REGI	TLAR CAB, SC =	SUPER CA	B, SWB =	Short Whe	el Base, LWB	= Lonr Wh	neele Base			
@ Test at 1	next higher ETW	7	1	1	1		Ţ			
A tear ar :		1	Ì	i		1				
Certificati	! ion Standards	1			1					
CCLULATOR.	50K/100K	i	İ	Ì	•	1				
NMHC:	0.25/0.31		İ		[	1	ļ			
		1		i	ĺ		<b>\</b>			
CO:	3.4/4.2	1	1	i	i	1				
NOx:	0.4/0.6	[	! 	<u> </u>	<u> </u>					
EVAP:	2.0									
COLD CO:	10.0									

## 1997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET Page 2 PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Manufacturer FORD MOTOR COMPANY Eng. Family VFM2.318G1EK  Evap Std: 50K X Useful Life with R/L Evap Engine Family: VFM1045AYPBA  Exh Std: Tier-0 Tier-1 X TLEV LEV ULEV ZEV; EPA Tier-0 Tier-1  Veh Class(es): PC LDT1 X LDT2 MDV1 MDV2 MDV3 MDV4 MDV5  Single Cert Std for Multi-Class Eng Fam: (specify: N/A, LDT1, MDV1, ETC.)  Exh Cert Fuel(s): Indo X Ph2 Diesel: 13 CCR 2282 or 40 CFR 86.113-90 or -94  M85 CNG LPG Other (specify)  Fuel Type(s): Dedicated Flex-Fuel Dual-Fuel Gasoline X Diesel M85  CNG LNG LPG Other (specify)  Hybrid: Type A B C , APU Cycle (e.g., Otto, Diesel, Turbine)  Engine Configuration: I-4 Displacement: 2.3 / Liter [40] / Cubic Inche  Engine: Front X Mid. Rear Drive: FWD RWD X 4WD-FT 4WD-PT  Exhaust ECS & Special Features (EG., EGR, MFI, TC, CAC): EGR, TWC. SFI HO2S(2)  (Use abbreviations per SAE J1930 Sep 91)								
Engine	Veh. Models	Trans.	Equiv.		Ign. Sys.	EGR	Catalyst	
	(all models				(ECM/PCM)			
CALIF	are 4x2 *)	A-Auto	Weight	#	Part No.			
		M-Man.			-12A650-	-9D475-	-5E212-	
A A N A N	MAZDA RC LWB MAZDA RC SWB MAZDA RC LWB MAZDA RC SWB RANGER RC LWB RANGER RC SWB RANGER RC SWB RANGER RC SWB	19 11 11 11 11 11 11 11 11 11 11 11 11 1	3375@ 3375@ 3500 3500 3375@ 3375 3500 3500	12.3 12.3 12.3 12.3 12.3 12.3	F77C-KA	F57EBA	F77AABA	
* RC = REGU @ Test at n Certificati NMHC: CO:	LAR CAB, SC = Sext higher ETW   on Standards					Lonr Wh	eele Base	

## 1997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET Page of \_\_\_\_ OF \_\_\_\_ PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Manufacturer	FORD MOTOR	COMPANY		Eng. Fam	ily <u>VFM2.3180</u>	1EK	
m 04-4 C	OV V HOAFul	Life wit	h R/L	Evap Eng	Ine ramily: _	ALMIAGINE	EDG
- 1 04-3 mile	O Triox-1	ע תודע	LEV	ULEV	ZEV ; EPA I	TET - 0 ""	1 +
TT-1 01 / 05	יות. זמי ל.חיד	ת.ד א די	т2 М	DV1 ML	)V2 MDV3	14TD A 47	_ rmv_
add - 1 a Camb	chd for Multi-	Class En	a Fam:	(spec	CITY: N/A, DUI	. I , I I I V V I I	EIC.)
Single Cert	el(s): Indo_X_	Ph2	Diesel:	13 CCR 228	32 or 40 CE	R 86.113-	90 or -94_
	MOE	CNIC	T DC	Other ispe	CITVI		
The I Mamo (a)	: Dedicated	Flex-	Fuel	Dual-Fuel	Gasoli	ne_X_ Di $\epsilon$	sel M85
	CINTCE T NICE	T.DC	Orner	ISDECTIVI			
Urbaid. Time	CNG LING B C	APU C	vcle (e.	q., Otto,	Diesel, Turbi	ine)	
Hyprica: Type	iguration: I-4	Displa	cement:	2.3 /	Liter	/	Cubic Inche
	10 لمائية بويد.	CONT F	rive. FW	m RWD X	<pre>{ 4WD-FT 4</pre>	WD-PT	
Engine: From	& Special Feat	ures (EG	EGR,	MFI, TC, C	:AC): <u>EGR. T</u>	AC SET .	1025 <sup>(Z</sup> )
Exhaust Ecs	& Pecial Lead		,,	(Use abb	oreviations pe	er SAE J19	930 Sep 91)
			<del></del>			T	
Engine	Veh. Models	Trans.	Equiv.		Ign. Sys.	1	Catalyst
Code/	(all models		Test	DPA	(ECM/PCM)	Syst.	
CALIF	are 4x2 *)		Weight	#	Part No.	Part No	
CALL:		M-Man.			-12A650-	-9D475-	-5E211-
						<u> </u>	
2.3L	]					15575 53	ן בי מכול ה
749TR05 N	MAZDA RC LWB	M	3375	12.3		!	F77AABA
	MAZDA RC SWB	"	3375	12.3	1 "	"	''   "
A	MAZDA RC LWB	п	3500	12.3	n	"	"
A	MAZDA RC SWB	11	3375@	12.3	"	"	
N	MAZDA SC SWB	10	3625	12.3	"	"	" 
A	MAZDA SC SWB	i n	3625@	12.3	117	"	!
N	RANGER RC LWB	_	3375	12.3	lt.	!!	11
N	RANGER RC SWB	•	3375	12.3	н	11	"
A	RANGER RC LWB	4	3375	12.3	j "	"	"
A	RANGER RC SWB		3375	12.3	0	"	"
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# Same DPA	for all tires	(P195/70	R14, P21	.5/70R14, E	225/70R14)		
* RC = REGU	JLAR CAB, SC =	SUPER CA	B, SWB =	Short Whe	eel Base, LWB	= Lonr Wh	neele Base
@ Test at 1	next higher ETW	7	1	1		1	ļ
9 1000 40 1			İ	ĺ			1
Certificat:	ion Standards	İ			1		ļ
<del></del>	50K/100K	1	1			ļ	1
NMHC:	0.25/0.31	İ		1	1	!	1
CO:	3.4/4.2		1		1		ļ
NOx:	0.4/0.6	ĺ		1		ļ	!
EVAP:	2.0	<u>i .                                    </u>	<u>i</u>		1		
COLD CO							

ENGINE FAMILY: VFM2.318G1EK ISSUED: 7-27-96 REVISED: 20.09.17.02 - 3

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### 1997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET Page \_\_\_\_ of\_\_\_\_ PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Veh Class(es Single Cert	FORD MOTOR  OK X Useful  er-0 Tier-1  S): PC LDT  Std for Multi-	Class En	g Fam:	(spec	cify: N/A, LD7	1, MDV1,	ETC.)
Fuel Type(s)	M82	CNG	E	Dual-Fuel	Gasoli	ne X Die	sel M85
-11	CNGLNG_	LPG	Other	(specify)_	Diesel Turbi	inal	
Engine Confi	CNGLNG_ ABC_ iguration: I-4 at_X_MidR & Special Feat	, APU C Displa	cement:_	2.3 /	Liter	/	Cubic Inche
				(Use ab	oreviations pe	SI SAD UIS	
Engine Code/ CALIF	Veh. Models (all models are 4x2 *)	Type:	Test	DPA	Ign. Sys. (ECM/PCM) Part No.	Syst.	
CAMII		M-Man.			-12A650-	-9D475-	-5E212 <i>-</i>
N A A N N	MAZDA RC LWB MAZDA RC SWB MAZDA RC LWB MAZDA RC SWB RANGER RC LWB RANGER RC SWB RANGER RC SWB RANGER RC SWB	11 11 11 11	3375@ 3375 3500 3500 3375 3375 3500 3375@	12.3 12.3 12.3 12.3 12.3 12.3	F77C-KB	F57EBA	F77AABA
* RC = REGU @ Test at :	for all tires ULAR CAB, SC = next higher ETW ion Standards 50K/100K 0.25/0.31 3.4/4.2 0.4/0.6 2.0 10.0	SUPER CA	R14, P21 B, SWB =	5/70R14, F Short Whe	2225/70R14) eel Base, LWB	= Lonr Wh	neele Base

ENGINE FAMILY: VFM2.318G1EK ISSUED: 7-27-96

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# 1997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET Page of PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Evap Std: 5 Exh Std: Tie Veh Class(es Single Cert Exh Cert Fue Fuel Type(s)	: Dedicated CNGLNG_	TLEV_ 1_X_ LD' Class En Ph2 CNG Flex-	LEVMg Fam: Diesel: LPG Other	ULEV	ZEV; EPA T  V2 MDV3  dify: N/A, LDT  2 or 40 CF  ccify)  Gasoli  Diesel, Turbi	mDV4	Tier-1 MDV5 ETC.) 90or -94_ selM85
Engine Confi Engine: From Exhaust ECS	e A B C iguration:_I-4_ nt_X_ Mid R & Special Feat	_ Displa ear D ures (EG	cemenc:_ rive: FW ., EGR,	MET TC. (	AWD-FT 4 CAC): EGR, Two previations pe	IC, SFI, F	02S(Z)
Engine Code/ CALIF	Veh. Models (all models are 4x2 *)	Type:		DPA	Ign. Sys. (ECM/PCM) Part No. -12A650-	Syst. Part No	
N A N A N A A	RANGER RC SWB RANGER SC SWB	11 11 11 11 11 11 11 11 11 11 11 11 11	3375 3375 3500 3375@ 3625 3625@ 3375 3375 3375 3625 3625	12.3 12.3 12.3 12.3 12.3 12.3 12.3 12.3	F77C-MC	F57EBA	F77AABA
* RC = REGU © Test at 1	for all tires ULAR CAB, SC = next higher ETV ion Standards 50K/100K 0.25/0.31 3.4/4.2 0.4/0.6 2.0	SUPER CA	R14, P21	5/70R14, I	2225/70R14) eel Base, LWB	= Long Wh	neele Base

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ENGINE FAMILY: VFM2.318G1EK

ISSUED: 7-27-96

REVISED:

R/C 2.3-103

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Manufacturer	FORD MOTOR (	COMPANY		Eng. Fam	ily <u>VFM2.318G</u> ine Family:	1EK VFM1045AY	PBA
Evap Std: 5	OK <u>X</u> Useful l r-0 Tier-1_	TTE WICT	1.FV	m.EV	ZEV ; EPA T	ier-0	Tier-l
Exh Std: Tie	r-0 Tier-1_			MD	v2 MDV3	MDV4	MDV5
Veh Class(es	Std for Multi-	LA LID	. Pam	(spec	ify: N/A, LDT	1, MDV1,	ETC.)
Single Cert	Std for Multi-	Class Eng	g ram:	CCB 22B	2 or 40 CF	R 86.113-	90 or -94
Exh Cert Fue	$(1(s): Indo_X)$	Pn2 '	DIESEI.		mi fre		
	M85	CNG	LPG	Ocher (spe	cify)	ne X Die	sel M85
Fuel Type(s)	: Dedicated	_ Flex-	Fuel	Juar-Fuer		<del></del>	
1 11 M	CNGLNG_ ABC_	APU C	- vcle (e.	g., Otto,	Diesel, Turbi	ne)	
Hyprid: Type	guration: I-4	_, Displa	cement:_	2.3 /	Liter	/	_Cubic Inche
Engine Confi	guration: <u>I-4</u> nt_X_MidR	ear D	rive: FW	DRWD_X	4WD-FT 4	WD-PT	ra s
Engine: From	nt_X_MidR & Special Feat	ures (EG	EGR,	MFI, TC, C	CAC): EGR. TW	<u>IC, SFI, H</u>	(025(2)
Exhaust ECS	& Special reac	mres (no	.,,	(Use abb	reviations pe	r SAE J19	30 Sep 91)
<del></del>	rich Madala	Trans.	Equiv.		Ign. Sys.		Catalyst
2105	Veh. Models		Test	DPA	(ECM/PCM)	Syst.	Part No.
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# Same DPA	for all tires ULAR CAB, SC =	SUPER CA	AB. SWB =	Short Wh	eel Base, LWB	= Long W	neele Base
* RC = REG	ב של בא מאבונט PTI	J	_, 	1		ĺ	1
@ Test at	next higher ETV	1	ì	ì	İ	1	
	· andorda	ļ		ļ		1	ļ
Certificat	ion Standards	ł		i	į	1	ļ
	50K/100K	1	1	ì	į	ļ	ļ
NMHC:	0.25/0.31	1	1	ι 1	i	İ	1
co:	3.4/4.2	•	l 1	1	1	i	•
NOx:	0.4/0.6		1	1		<u>i                                     </u>	<u> </u>
EVAP:	2.0						
COLD CO:	10.0						